Portal to Portal: NMCI and Distance Support for COTS Based Systems

Authors:
Mike Erickson, Program Manager, Ruggedized Computing Infrastructure Programs
Tim Boland, Systems Analyst, Lifetime Support Technology

The Naval Capability Pillars of Sea Basing and FORCEnet will provide sea-based and joint forces the advantages of enhanced security, rapid and joint employability as well as operational independence. To achieve this vision the Navy must transform and transfer shore-based capabilities to sea-based support functionality to improve the reach and sustainability of globally-deployed naval forces. This paper discusses harnessing the power of current and emerging technologies such as XML tagging, web services, and bandwidth optimization to make the real time, effects driven, demand and support network – the network that joins the Navy and Marine Corp Internet to a Global Real Time Supportability Network - a reality

"Combat in OIF (Operation Iraqi Freedom) was characterized by very high transaction rates. These rates were so high that they outpaced the ability of both Logistics and intelligence systems. High transaction rates are a characteristic of information age warfare. So… logistics and intelligence will have to move into the information age" Transformation Trends 19 April 2004

Despite the oft heard admonition that amateurs discuss tactics, professionals discuss logistics, it appears logistics is still bringing up the rear. The Transformation of Defense has been underway for some time but only recently have concepts like Sense and Respond Logistics and Logistical Situational Awareness – aimed at reducing logistics response time in support of the warfighter – appeared in the transformation literature. Simply providing beans, bullets, and black oil, critical logistics requirements to be sure, is not enough to guarantee operational availability on today's hi-tech battlefield. Like information age warfare, high transaction rates, which require the homogenization of information from many systems, are characteristic of commercial technology markets. Complications that high transaction rates in combat impose on logistic support are exacerbated by the velocity of technological change in the COTS based components that are increasingly employed on the battlefield. Consider technology obsolescence – you've heard of Moore's Law – now think about it in multiple dimensions. The rates at which the various technology commodity groups (memory, processors, displays, firmware, etc..) change are different, largely out of the DoD's control, and potentially disastrous. Those that have recently upgraded to Microsoft XP and find that your scanner no longer works, have experienced the very real effects of this on a personal level. The logistics challenge of supplying beans, bullets, and black oil has been joined by the challenge of providing microchips, drivers, and firmware updates in near real time. The network described in this paper, together with NMCI, BLII, and IT-21 will provide a seamless "Point-of-Effect to Source of Support" network - a key enabler of the higher transaction rates required today and in the future.